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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,748	02/10/2004	Klaus Goller	1890-0054	8728
7590 11/15/2005				
Maginot, Moore & Beck Bank One Tower Suite 3000 111 Monument Circle Indianapolis, IN 46204			EXAMINER KALAM, ABUL	
			ART UNIT 2814	PAPER NUMBER

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.		Applicant(s)	
	10/775,748		GOLLER ET AL.	
	Examiner		Art Unit	
	Abul Kalam		2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/20/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election without traverse of Claims 12-20 in the reply filed on September 22, 2005 is acknowledged.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on February 10, 2003. It is noted, however, that applicant has not filed a certified copy of the 103 05 365.4-33 application as required by 35 U.S.C. 119(b).

Specification

3. The disclosure is objected to because of the following informalities: On page 12 line 8, first and second recesses are referenced incorrectly (should be 229 and 231). This error is repeated throughout the paragraph. Appropriate correction is required. On page 13 line 10, first contact terminal and second contact terminal are referenced incorrectly (should be 237 and 239). On page 13 line 33, reference 213 should refer to second terminal surface, not "second surface." On page 14 line 6, conductive material is referenced incorrectly (should be 219). There are similar errors of incorrect reference numerals or figures throughout the disclosure.

Appropriate correction of all errors is required.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the

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description: 319. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claims 12-20 are objected to because of the following informalities:

The claimed "the insulating layer" lacks proper antecedent basis (claim 12 line 10). Claims 12-20 depend from claim 12 and thus contain the same error. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 12-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claimed "the former," in claim 12 line 10, lacks antecedent basis and is not clearly claiming a subject matter, which renders the claim indefinite. Claims 13-20 are dependent on claim 12 and thus are also rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 12, 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Pasch et al. (US 6,239,491).

With respect to claim 12, Pasch teaches:

An arrangement for contacting terminals of a substrate (2) comprising: a substrate surface, a first terminal (14) having a first terminal surface, and a second terminal (132) having a second terminal surface, the first terminal surface being located at a shorter distance from the substrate surface than the second terminal surface (Fig. 3), the arrangement comprising:

A first insulating layer (150) on the substrate surface, having an insulation-layer surface being located at a longer distance from the substrate surface than the second terminal surface (Fig. 2a); a second insulating layer (170) arranged on the first insulting layer:

Wherein the first insulating layer has a contact via (134 and 154) which extends from the insulation-layer (150) surface to the first terminal (14) surface and is filled with

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a first conductive material and wherein the insulating layer (170) has a recess penetrating the former (as best understood by the examiner as the second insulating layer), extending up to the first conductive material, and being filled with a second conductive material; and wherein a recess (152 and 172) extends to the second terminal surface through the first and second insulating layers (150 and 170), and is filled with a third conductive material (col. 7 lines 43-47, lines 59-62, and col. 8 lines 55-61).

Furthermore it is inherent that the substrate, terminal, and insulation layers all have a surface.

With respect to claim 16, Pasch teaches an arrangement of contacting terminals as set forth above in claim 12, wherein at least one of the first conductive material, the second conductive material and the third conductive material comprises metal (column 7 lines 43-45).

With respect to claim 17, Pasch teaches an arrangement of contacting terminals as set forth above in claim 12, wherein the first conductive material is tungsten (column 7 lines 43-45).

With respect to claim 18, Pasch teaches an arrangement of contacting terminals as set forth above in claim 12, wherein at least one of the second conductive material and the third conductive material is copper (col. 8 lines 55-61).

With respect to claim 19, Pasch teaches an arrangement of contacting terminals as set forth above in claim 12, wherein the second conductive material (173) is conductively connected to first conductive material (154 and 134) and forms a first contact terminal, and wherein the third conductive material (172 and 152) is

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conductively connected to the second terminal (132) and forms a second contact terminal.

With respect to claim 20, Pasch teaches an arrangement of contacting terminals as set forth above in claim 12, wherein the first contact terminal (32' and 52') and second contact terminal (14 and 134 and 54') form a wiring plane (Fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pasch '491 as applied to claim 12 above, and further in view of Cai et al. (6,830,966).

With respect to claim 13, Pasch teaches an arrangement for contacting terminals of a substrate as described in claim 1 above with the exception of explicitly disclosing:

The first terminal is one of a base terminal and a collector terminal, and the second terminal is an emitter terminal, arranged on a stack, of a bipolar transistor.

However, Cai teaches a device wherein the first terminal is one of a collector terminal (18), and the second terminal is an emitter terminal (26), arranged on a stack, of a bipolar transistor (column 5 lines 26-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the arrangement of contacting terminals of substrate as set

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forth above to use the terminals for a bipolar transistor as taught by Cai because of the speed and precision of bipolar transistors.

With respect to claim 14, Cai teaches an arrangement of contacting terminals as set forth above in claim 12, wherein the first terminal is a drain terminal (18) and the second terminal is gate terminal (30) of a field-effect transistor (column 1 lines 8-10). It is well known in the art that an NMOS device is a field-effect transistor.

With respect to claim 15, Cai teaches an arrangement of contacting terminals as set forth above in claim 12, wherein the first terminal (18) is formed on the substrate (2) and is a collector terminal of a bipolar transistor (column 5 lines 26-28).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

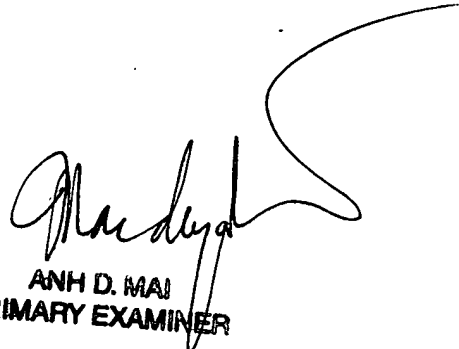
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abul Kalam whose telephone number is 571-272-8346. The examiner can normally be reached on Monday - Friday, 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abul Kalam
November 7, 2005



ANH D. MAI
PRIMARY EXAMINER